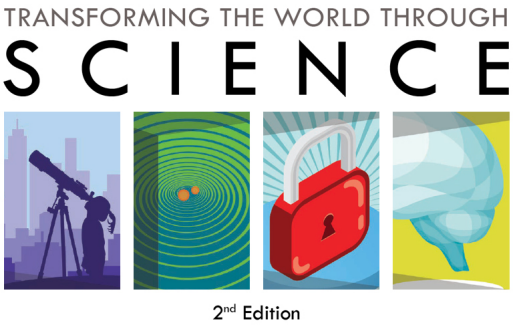
Quick Reads From NSF.gov

March 5, 2018

01

'Transforming the World Through Science' second edition



Basic research pushes the boundaries of what is possible and creates a deeper understanding of the world around us. NSF fuels that painstaking pursuit for answers across all science and engineering (S&E) fields. This book is a snapshot of impacts that come from NSF-funded investments. It does not capture the entire scope of research that NSF supports, nor is it a complete record of the many inventions, products, services and industries that have come from NSF-funded research. Instead, it is a glimpse of how science addresses societal challenges and will hopefully give the reader a better understanding of and appreciation for the investments in basic research that transform the world around us. Learn more about the impact of NSF's investments in S&E research and education by reading NSF's second edition of "Transforming the World Through Science."

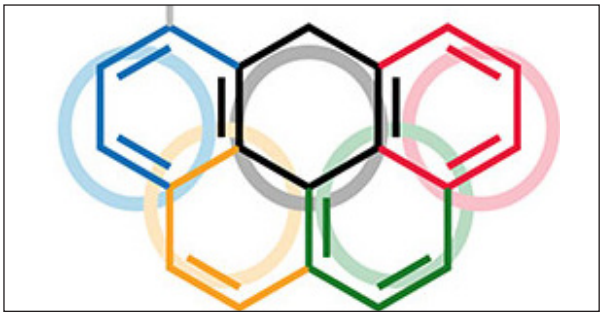
02

'Science of Snow -- Science and Engineering of the 2014 Olympic Winter Games'

With the 2018 Winter Olympic Games underway in PyeongChang, South Korea, it's a great time to look back at this "Science of Snow" video made for the 2014 Winter Olympic Games. Find out more about how snow forms and reacts in this NSF video.

03

Researchers achieve 'Olympic ring' molecule breakthrough just in time for Winter Games



More than 7,000 miles away from the snowcapped peaks of PyeongChang, scientists from Florida State University's Department of Chemistry and Biochemistry unlocked a novel strategy for synthesizing a highly versatile molecule called olympicene -- a compound of carbon and hydrogen atoms named for its familiar Olympic ring shape. Find the full story in this NSF News From the Field item.

04

NSF presents FY 2019 budget request

On Feb. 12, 2018, President Donald J. Trump's Fiscal Year (FY) 2019 budget request for NSF was presented to Congress. NSF Director France Córdova issued the following statement:

Under the President's Fiscal Year 2019 budget request, NSF will continue its support for groundbreaking research in areas including computer science, biology, engineering, geoscience, mathematics, the physical sciences, and the social sciences. This budget allows us to continue setting priorities that responsibly allocate federal funding, through our 10 Big Ideas for Future NSF Investments and other strategies that connect the talents of the science and engineering community with the needs of the American public. Read more in this NSF Press Statement.

05

Statement on award of cooperative agreement for management and operations of Arecibo Observatory

NSF is pleased to announce that beginning Feb. 22, the University of Central Florida (UCF) will start formal transition activities to take on the operations and management of NSF's Arecibo Observatory in Puerto Rico. NSF is currently negotiating the operations and management award with UCF. This award ensures continued science-focused operations that maintain atmospheric, planetary and astronomical research, including radio observations of astronomical sources, planetary radar observations of solar system and near-Earth objects, and studies of Earth's atmosphere. Find out more in this NSF Press Statement.

06

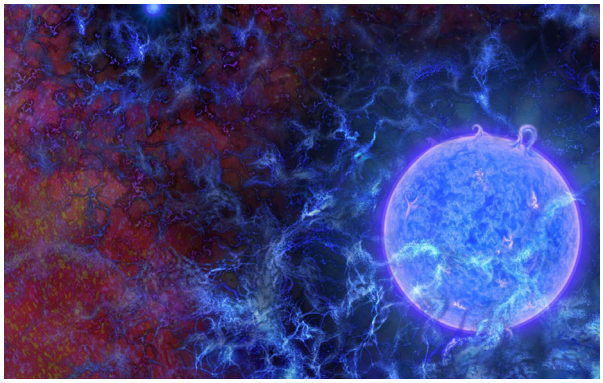
'Newton's Third Law of Motion – The Science of NFL Football'

With another Super Bowl in the books, it's a great time to learn about Newton's third law of motion and the science of NFL football. NBC's Lester Holt looks at Newton's third law of motion and the role that conservation of momentum plays whenever players collide on the football field, with input by former NFL linebacker Hardy Nickerson, Tony Schmitz of the University of Florida and Jim Gates of the University of Maryland. Learn more in this NSF video.

07

Astronomers detect ancient signal from first stars in universe

For the first time, astronomers have detected a signal from stars emerging in the early universe. Using a radio antenna not much larger than a refrigerator, these NSF funded researchers discovered that ancient suns were active within 180 million years of the Big Bang. Read the full story in this NSF Press Statement.



08

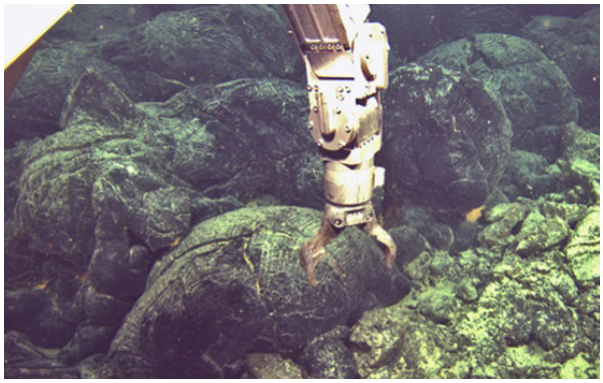
Spinach to hearts: Leafy vegetable inspires new way to generate heart tissue

Most people see a vegetable when they see a spinach leaf. But in a lab at the Worcester Polytechnic Institute, they see the potential to create heart tissue. Ph.D. students at the lab are training to be leaders in bioengineering, particularly biofabrication, in a unique research setting that promotes an innovator's mindset. They're thinking outside the box to develop practical, commercially viable technologies that fulfill critical unmet needs. Find out more in this Science Nation video.

09

A one-two punch may have helped deck the dinosaurs

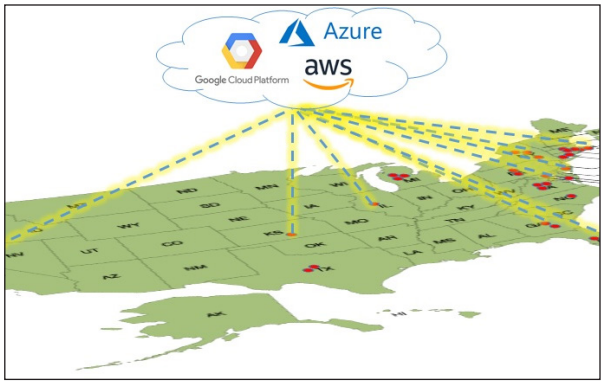
A record of volcanism preserved along ancient mid-ocean ridges provides evidence for heightened worldwide magmatic activity 66 million years ago, just after the Chicxulub meteor struck Earth, according to University of Oregon scientists. Read the full story in this NSF News From the Field item.



10

Leading cloud providers join with NSF to support data science frontiers

NSF is providing nearly $30 million in new funding for research in data science and engineering through its Critical Techniques, Technologies and Methodologies for Advancing Foundations and Applications of Big Data Sciences and Engineering (BIGDATA) program. The BIGDATA program funds novel research in computer science, statistics, computational science and mathematics that seeks to advance the frontiers of data science. The new BIGDATA awards will benefit from the unique, new engagement between NSF and leading cloud providers to foster innovation and provide a platform for computation, storage and analytics at large scale. This collaboration will specifically provide BIGDATA projects with cloud credits -- enabling access to cloud-based storage and computing. Learn more about BIGDATA in this NSF News Release.



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